

### Remarks

Claims 1 - 15 are pending. Favorable reconsideration is respectfully requested.

Claim 1 - 14 have been objected to as set forth in the Office Action , page 2. Applicant respectfully points out the last two lines of claim 1, which indicates that the organosilicon compound contain at least one unit of the formula (III) where e is not zero, i.e. all the compounds claimed must contain at least one alkynol group. Withdrawal of the objection to the claims on the basis set forth in the Office Action is solicited.

Claims 1 and 2 have been rejected under 35 U.S.C. § 102(a) and § 102(b) over several Journal articles pertaining to organic synthesis of complex organic compounds employing silane intermediates. Claim 1 has been amended to recite that the sum of  $e + f$  is less than or equal to 3, as set forth on page 4, line 3 of the specification. These compounds are thus polysiloxanes, minimally a polysiloxane which is a disiloxane ( $e + f = 3$ ). The prior art does not disclose, nor does it teach or suggest such compounds. Withdrawal of the rejections of claims 1 and 2 under 35 U.S.C. § 102 is solicited.

Claim 3 - 9 have been objected to. Applicant submits that the amendment to claim 1 should render claims 3 and 4 allowable. Note that claims 3 and 4 have been amended to recite that  $e + f < 3$ , i.e. polysiloxanes, as originally written but employing other language.

Claims 5 - 9 have been rewritten in independent form (claim 5 is independent), by incorporating the limitations of original claim 1 into claim 5. These claims should thus be allowable.

Claims 10 - 14 have been rejected over Chiba U.S. 5,607,992 ("*Chiba*") under 35 U.S.C. § 102(b) (10 - 14) and over Cowan U.S. Patent 4,877,820 ("*Cowen*") (10 - 13). Applicant respectfully traverses these rejections.

The present invention pertains to specific alkynol-functional silanes and siloxanes and their use in preparing addition-cured elastomers. In addition-curable elastomer compositions, an alkenyl-functional compound, most often a vinyl-functional organopolysiloxane, is hydrosilylated with an Si-H-functional organopolysiloxane in the presence of a hydrosilylation catalyst. In almost all practical uses of such compositions, the combined mixture must have a reasonable pot life so that processes such as casting, injection molding, coating and the like may be accomplished prior to crosslinking to a thermoset product. One method of accomplishing a longer pot life is to add alkynols such as 1-ethynyl-1-cyclohexanol (see Comparative Example 1) which inhibit the hydrosilylation reaction. Such inhibitors have been widely used in the past, but suffer from several drawbacks. The inhibitor must be effective at room temperature, but its inhibiting effect must dissipate at elevated temperature, otherwise the composition will not cure.

Alkynols have the disadvantage of having limited solubility in the polysiloxane composition as well as being volatile. These properties result in several undesirable effects in cured elastomers. First, volatilization of the inhibitor tends to create a rougher surface of the molded product. Second, due to migration during cure (possibly the result of different solubility parameters as between the uncured composition and the cured composition) the hardness of parts prepared therefrom is not uniform throughout their cross-section. This is most notable with softer parts, i.e. Shore A 30 and below.

The use of the alkynol-functional organosilicon compounds of the present invention allows for smoother parts of more uniform hardness. In addition, the parts have been found to be able to produce more uniform coatings, and to produce coatings and molded parts with superior adhesion to substrates as compared to coatings of compositions employing prior art alkynol inhibitors. These differences in physical properties of the cured elastomers means that despite having same overall similarity to compositions not containing the subject invention inhibitors of claim 1, the cured products are in fact different.


Neither *Chiba* nor *Cowan* disclose the use of any compound of claim 1 in addition-curable products. Therefore, these references cannot anticipate a product prepared from Applicant's composition, as the *Chiba* and *Cowen* compositions will not contain the compound having units of the formula III or its reaction products. Withdrawal of the rejection of claims 10 - 14 over *Cowen* or *Chiba* under 35 U.S.C. § 102 is solicited.

New claims 16 - 20 has been added, similar to the scope of claims 10 - 14 but further indicating that the organosilicon compound containing units of formula (III) are present in amounts sufficient to inhibit the room temperature cure of the composition. Both the new claims as well as the amended claims are fully supported by the specification as filed, and therefore raise no issue of new matter.

Applicant submits that the claims are now in condition for Allowance, and respectfully request a Notice to that effect. If the Examiner believes that further discussion will advance the prosecution of the Application, he is highly encouraged to telephone Applicants' attorney at the number given below.

Respectfully submitted,

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